My team's project is called "3D Web Platform," and can be summed up as "a web-based platform for storing and displaying 3D models." More thoroughly described, the goal product is a full-stack web application where users will be able to upload, manage, and display 3D models. They will also be able to create projects to group models together, as well as share models and/or projects with other users. The front-end client will be written with Typescript that is based on the React framework and uses three.js to display models, supported by a Python back-end and a database, likely PostgreSQL, to store users, permission, projects, models, and more. Users and projects are meant to be set up so that the platform can be used by various different groups, organizations, and/or companies. Aside from the end product, the project intends to see this idea through each stage of a formal development cycle and give team members a chance to work through that process, as well as watch the platform grow as work is done on it.

Unfortunately, few of my classes thus far can be applied to this project, as they haven't really covered aspects of web development, but four do come to mind: Database Design/Development (CS 4092), Software Engineering (EECE 3093C), Technical Writing (ENGL 4092), and User Interface 1 (CS 5167). The process of database normalization that we learned in Database Design is critical to making any given database both functional and easy to use, which will come in handy once we start working on the database for the 3D platform. Software Engineering introduced us to the different types of software development cycles, which should make the development process for this project over this semester and the next more familiar. Technical Writing's coverage of a lot of document types, both formal and informal, taught me how to choose the right language, convey the right tone, and present the right information to make a piece do only what it needs to do and nothing more. Those lessons should help me write better documents to support the 3D Web Platform as the project progresses. I'm currently enrolled in User Interface, so I don't have previous learning to pull from

as of yet, but I expect what I learn from it going forward will lend itself very handily once we reach the design portions of project development.

Unlike my previous classes, all five of my co-ops were focused on web development. My first two co-ops were with Blubrry, where I worked on a new feature set for their podcasting service using PHP, Python, and Javascript. I also designed, built, and managed the database for these features, revising it several times as the project was developed to make sure we were only storing data we needed. That practical experience, coupled with what I learned in classes, will be a notable help when designing our database and ensuring that it's sensible, readable, and easily utilized. My last three co-ops have been with Kinetic Vision, where I worked on a number of web applications with very different tech stacks. Most of my work has been with stacks using Javascript React and Python, which lines up neatly for the direction this project is headed. KV is also where I've learned the most about best practices with web applications, which will help to shape the project repository structure once work on the platform itself begins.

I'm definitely looking forward to reaching that point, because I really enjoy building the front-ends of web apps. The structure and workings of React components makes sense to me and they are enjoyable to create! I also really like being able to see a page of the app come together as I write more pieces for it. I'm also looking forward to building the platform from scratch and being able to implement up-to-date project structure best practices. By the end of the project, I hope to have extensive documentation for the platform, including planning documents and various page mockups, and at least a few notable features of the platform built, such as the viewer for the 3D models. I've unfortunately not yet had the chance to watch a project go through the initial phases of development that are focused on design, planning, and documentation, so I'm glad to be a part of those phases with this one. Other

accomplishments I'm expecting are to gain proficiency with new technologies, like three.js, and a better understanding of 3D models and the various formats they come in.

I think a great approach to start designing our project would be to explore other online storage sites, such as Google Drive or Dropbox, and take note of what features are user friendly. We can then keep these features in mind when planning our own feature set to ensure we're putting the user first. We should also decide on a component library to give our platform a consistent style, make our mockups more accurate, and ease development of front-end pages. Lastly, I think our preliminary approach should be feature-focused, to plan out our major requirements fully before we deal with tying them together. As our design progresses and work is done, that work should be measured by the time whoever did it put in, even if it didn't get done. Progress is progress, no matter how far it takes us. Eventually, we'll be done once the requirements we set for the project have been met and we'll have done a great job if it works well, looks better, follows best practices, and is well-documented.